

Each year, more than four hundred adults and children in the U.S. are struck by lightning. On average, more than 70 people are killed and many others suffer with permanent disabilities. Most of these tragedies could be avoided.

When thunderstorms threaten, event organizers or officials must not let the desire to start or finish an activity or event cloud their judgement when the safety of participants and spectators is in jeopardy.

***It is important for event planners to know some basic facts about lightning and its dangers –***

- **All thunderstorms produce lightning and are dangerous.** In the average year, lightning kills more people than either tornadoes or hurricanes.
- **Lightning often strikes outside the area of heavy rain and may strike as far as 10 miles from any rainfall.** Many deaths from lightning occur ahead of the storm simply because people wait too long before seeking shelter, or after the storm because people return to their activities too soon.
- **If you hear thunder, you are in danger.** Anytime thunder is heard, the thunderstorm is close enough to you that lightning could strike your location at any moment.
- **Lightning injuries can lead to permanent disabilities or death.** On average, about ten percent of lightning strike victims die and many of the survivors suffer very serious life-long disabilities.

***To avoid exposing participants or spectators to the risk of lightning take the following precautions –***

- **Postpone activities if thunderstorms are imminent.** Prior to the event, check the latest forecast and, when necessary, postpone activities early to avoid being caught in a dangerous situation. Stormy weather can endanger the lives of participants, staff, and spectators.
- **Plan ahead.** Know where people will go for safety. Know how much time it will take them to get there. Have specific guidelines for suspending the event so that everyone has time to reach safety before the threat becomes significant. Follow the plan without exception.
- **Keep an eye on the sky.** Pay attention to weather clues that may warn of imminent danger. Look for darkening skies, flashes of lightning, or increasing wind, which may be signs of an approaching thunderstorm.
- **Listen for thunder.** If you hear thunder, go to a safe place immediately.
- **If you see or hear a thunderstorm coming, immediately suspend your event and instruct everyone to go to a safe place.** Sturdy buildings provide the most protection. Avoid sheds, small or open shelters, bleachers, or grandstands. If a sturdy building is not nearby, a hard-topped metal vehicle with the windows closed will offer some protection, but avoid touching any metal.

***Precautions continued...***

- **Stay away from tall things like trees, stages, towers, and utility poles.**
- **Lightning can travel long distances through metal so stay away from bleachers, scaffolding, and fences.**
- **Do not resume outdoor activities until 30 minutes has passed since the last thunder was heard or the last lightning was observed.**
- **As a further safety measure, officials at outdoor events should have a NOAA Weather Radio with a tone-alert feature during the event.** The tone alert feature will automatically alert you when a severe thunderstorm watch or warning is issued. Regional broadcast stations include Reno/Sparks, Carson City, Truckee and the Lake Tahoe area on 162.550 Mhz; Reno/Sparks, Fallon, Fernley and the Pyramid Lake area on 162.450 Mhz; and Yerington, Hawthorne, Walker Lake area, Mammoth, and the Mono Lake area on 162.475 Mhz.

***If you feel your hair stand on end (which indicates that lightning is about to strike) –***

- **Crouch down on the balls of your feet, put your hands on your knees, and bend your head down.** Make yourself the smallest target possible and minimize your contact with the ground.
- **Do not lie flat on the ground.**

## *What to do if someone is struck by lightning –*

- **Lightning victims do not carry an electrical charge, are safe to handle, and need immediate medical attention.**
- **Call for help.** Have someone call 9-1-1 or your local ambulance service. Medical attention is needed as quickly as possible.
- **Give first aid.** Cardiac arrest is the immediate cause of death in lightning fatalities. However, some deaths could be prevented if the victim receives the proper first aid immediately. Check the victim to see that they are breathing and have a pulse and continue to monitor the victim until help arrives. Begin CPR if necessary.
- **If possible, move the victim to a safer place.** An active thunderstorm is still dangerous. Don't let the rescuers become victims. Lightning can strike the same place twice



**STAY INFORMED ABOUT THE STORM** – by listening to NOAA Weather Radio for the latest forecast and any severe thunderstorm WATCHES or WARNINGS. Severe thunderstorms are storms that produce winds of 58 mph or more, or hail 3/4 of an inch or larger in diameter.

**A severe thunderstorm WATCH is issued** when conditions are favorable for severe weather to develop.

**A severe thunderstorm WARNING is issued** when severe weather is imminent. Weather Service personnel use information from weather radar, satellite, lightning detection, spotters, and other sources to issue these warnings.

Remember that **all thunderstorms produce lightning and all lightning can be deadly to those outside.**

**NOAA WEATHER RADIO  
IS THE BEST MEANS TO  
RECEIVE FORECASTS  
AND WARNINGS FROM  
THE NATIONAL  
WEATHER SERVICE:**

For additional information contact:

U.S. Department of Commerce, NOAA  
National Weather Service  
2350 Raggio Parkway  
Reno, NV 89512

[www.wrh.noaa.gov/reno](http://www.wrh.noaa.gov/reno)

## *Event Planner's guide to lightning safety...*



## *the underrated killer!*

A SAFETY GUIDE

U.S. DEPARTMENT OF  
COMMERCE, NOAA

NATIONAL WEATHER  
SERVICE  
Reno, Nevada



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This safety guide has been prepared to help planners and officials at outdoor events recognize the dangers of lightning and take appropriate safety precautions.